

Amendments to the Claims

Please cancel Claim 8. Please amend Claims 1, 6 and 7. The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing

1. (Currently Amended) A heterostructured field effect transistor having ~~a multi-gate configuration~~ a plurality of gates wherein the gates have a trapezoidal cross-section, the gate voltages being individually ~~biased~~ applied to tailor ~~[[the]]~~ a potential along a channel of the transistor field.
2. (Original) The transistor of claim 1 wherein the potential is a substantially uniform potential.
3. (Original) The transistor of claim 2 wherein the heterostructured field effect transistor is a high electron mobility transistor.
4. (Original) The transistor of claim 3 wherein the tailoring occurs along a channel of the high electron mobility transistor to create a uniform distribution of energy subbands.
5. (Original) The transistor of claim 4 wherein the uniform potential accelerates electrons as they are injected into the channel.
6. (Currently Amended) The transistor of claim 4 wherein the width of ~~[[the]]~~ a heterostructure barrier is substantially uniform along the channel.
7. (Currently Amended) The transistor of claim 6 wherein the tailoring is accomplished by making the slope of ~~[[the]]~~ a 2D electron gas barrier more uniform along the channel.
8. (Canceled)

9. (Original) The transistor of claim 1 wherein the distance between two gates is submicron.
10. (Original) The transistor of claim 1 wherein the multi-gate configuration is a two-gate configuration.
11. (Original) The transistor of claim 1 wherein the multi-gate configuration is a three-gate configuration.
12. (Original) The transistor of claim 1 wherein the multi-gate configuration is a four-gate configuration.
13. (Original) The transistor of claim 1 wherein the transconductance of the transistor is substantially linear over a range of gate voltages.